WHAT IS CLAIMED IS:

1. An optical reproducing device comprising:

a reproducing signal production section, which projects a light beam onto an optical memory medium, and, based on reflected light of the light beam, produces a reproducing signal corresponding to recorded marks recorded in the optical memory medium;

a control signal output section, which detects a mean value of a signal quantity of the reproducing signal produced by said reproducing signal production section, and produces a first control signal corresponding to the mean value; and

a reproducing power control section, which, based on the first control signal produced by said control signal output section, controls reproducing power of the light beam projected by said reproducing signal production section such that the signal quantity of the reproducing signal is a predetermined value.

2. The optical reproducing device set forth in claim 1, wherein said reproducing signal production section comprises:

a light beam projecting section, which projects the light beam onto the optical memory medium comprising a

recording layer in which recorded marks are recorded and a reproducing layer to which the recorded marks are copied, and which forms on the reproducing layer an aperture of a size corresponding with reproducing power of the light beam; and

a light receiving section, which, based on light reflected from the aperture, produces a reproducing signal corresponding to the recorded marks of the recording layer.

3. The optical reproducing device set forth in claim 2, wherein said control signal output section comprises:

an amplitude value detecting section, which detects amplitude values of a reproducing signal corresponding to the recorded marks of the optical memory medium;

a mean value producing section, which produces a mean value of a predetermined number of the amplitude values detected by said amplitude value detecting section; and

a control signal producing section, which, based on the mean value produced by the mean value producing section, produces a first control signal.

4. The optical reproducing device set forth in claim 3, wherein:

said amplitude value detecting section detects a predetermined quantity of amplitude values of a reproducing signal corresponding to first recorded marks of a predetermined mark length, and a predetermined quantity of amplitude values of a reproducing signal corresponding to second recorded marks of a mark length differing from that of the first recorded marks; and

said mean value producing section comprises a first mean value calculating section, which, based on the amplitude values of the reproducing signal corresponding to the first recorded marks, calculates a mean value of the amplitude thereof, and a second mean value calculating section, which, based on the amplitude values of the reproducing signal corresponding to the second recorded marks, calculates a mean value of the amplitude thereof; and

said control signal producing section produces the first control signal by finding a ratio between the mean value calculated by said first mean value calculating section and the mean value calculated by said second mean value calculating section.

5. The optical reproducing device set forth in claim 4, wherein said reproducing power control section comprises:

a differential amplifier, to which is inputted the

first control signal and a predetermined standard value, and which produces a second control signal which is a result of comparison between the first control signal and the standard value; and

a reproducing power adjusting section, which controls the reproducing power such that the value of the second control signal is reduced.

6. The optical reproducing device set forth in claim 5, further comprising:

a binarized data producing section, which produces binarized data corresponding to the reproducing signal outputted by said reproducing signal production section, and an error correcting section, which corrects errors in the binarized data, wherein:

the second control signal is produced such that a BER of the binarized data is within a range which is correctable within the correcting ability of said error correcting section.

7. The optical reproducing device set forth in claim 4, wherein:

the predetermined quantity is 5 bytes or more.

8. The optical reproducing device set forth in claim 7, wherein:

the predetermined quantity is 40 bytes or less.

9. The optical reproducing device set forth in claim 4, wherein:

the predetermined quantity is 14 samples or more.

10. The optical reproducing device set forth in claim 9, wherein:

the predetermined quantity is 120 samples or less.

11. The optical reproducing device set forth in claim 7, wherein:

the first and second recorded marks are recorded in said optical memory medium by the (1,7)RLL modulation method; and

the first recorded marks have mark lengths and intervals between marks which are 2 channel bits in length; and

the second recorded marks have mark lengths and intervals between marks which are 8 channel bits in length.

12. The optical reproducing device set forth in claim 7, wherein:

the first and second recorded marks are recorded in said optical memory medium by the NRZI modulation method; and

the first recorded marks have mark lengths of 2 channel bits and intervals between marks which are 1 channel bit in length; and

the second recorded marks have mark lengths and intervals between marks which are 8 channel bits in length.

13. An optical memory medium comprising a recording layer for recording data, and a reproducing layer, laminated on said recording layer, on which an aperture is formed by projection of a predetermined light beam, from which aperture the data recorded on said recording layer is read, wherein:

a track for recording of data includes a reproducing power control domain of 5 bytes or more and 40 bytes or less, for recording of recorded marks for reproducing power control, for controlling reproducing power of the light beam.

14. The optical memory medium set forth in claim 13, wherein said reproducing power control domain includes:

a domain of 5 bytes or more and 40 bytes or less, for recording of first recorded marks of a predetermined mark length; and

a domain of 5 bytes or more and 40 bytes or less, for recording of second recorded marks of a mark length differing from that of the first recorded marks.

15. The optical memory medium set forth in claim 13, wherein:

a said reproducing power control domain is provided in each sector formed on said track.

16. An optical reproducing device comprising:

a reproducing signal production section, which projects a light beam onto an optical memory medium, and, based on reflected light of the light beam, produces a reproducing signal corresponding to recorded marks recorded in the optical memory medium;

a digital signal output section, which outputs digital signals corresponding to the reproducing signal;

a demodulation section, which demodulates the digital signals; and

a reproducing power control section, which, based on

the digital signals, controls reproducing power of said reproducing signal production section;

said digital signal output section comprising:

a clock signal output section, which outputs a clock signal in accordance with the modulation method of the recorded marks, the demodulation method of said demodulation section, and the control method of said reproducing power control section; and

a digital signal producing section, which, based on the clock signal outputted by said clock signal output section, samples the reproducing signal and produces digital signals.

17. The optical reproducing device set forth in claim 16, wherein said clock signal output section comprises:

a clock signal producing section, which, based on the reproducing signal, produces a plurality of different clock signals; and

a clock signal selecting section which, based on the reproducing signal, selects from among the plurality of different clock signals a clock signal in accordance with either the modulation and demodulation methods, or the control method, and outputs the selected clock signal to said digital signal producing section.

18. The optical reproducing device set forth in claim 17, wherein said clock signal selecting section comprises:

a recorded mark judging section which, based on the reproducing signal, judges whether recorded marks being reproduced are recorded marks for reproducing power control or recorded marks to be demodulated, and outputs the result of this judgment; and

a clock signal selecting circuit, which, based on the result of the judgment, selects a clock signal from among the plurality of clock signals outputted by said clock signal producing section.

19. The optical reproducing device set forth in claim 18, wherein said clock signal producing section comprises:

a first clock signal producing circuit, which, based on the reproducing signal, produces a first clock signal in accordance with the modulation method and the demodulation method; and

a second clock signal producing circuit, which, based on the reproducing signal, produces a second clock signal in accordance with the control method.

20. The optical reproducing device set forth in claim 19, wherein:

the modulation method of the recorded marks is the (1,7)RLL modulation method;

the reproducing power control method used by said reproducing power control section is a method of controlling reproducing power by detecting mean values of amplitude values of reproducing signals corresponding to each of the two types of recorded marks of different mark length for reproducing power control recorded in the optical memory medium, calculating a ratio between the two mean values, and controlling reproducing power such that the ratio approaches a previously set standard value;

the demodulation method used by said demodulation section is the PR(1,2,1)ML demodulation method; and

the phase of the first clock signal is offset one-half cycle with respect to the phase of the second clock signal.

21. The optical reproducing device set forth in claim 16, wherein:

said clock signal output section of said digital signal output section outputs a single clock signal in accordance with the modulation method, the demodulation

method, and the control method; and

said digital signal output section further comprises:

a digital signal separating section, which separates a first digital signal to be demodulated from a second digital signal for reproducing power control, and outputs the first digital signal to said demodulation section and the second digital signal to said reproducing power control section.

22. The optical reproducing device set forth in claim 21, wherein:

the modulation method of the recorded marks is the (1,7)RLL modulation method;

the reproducing power control method used by said reproducing power control section is a method of controlling reproducing power by detecting mean values of amplitude values of reproducing signals corresponding to each of the two types of recorded marks of different mark length for reproducing power control recorded in the optical memory medium, calculating a ratio between the two mean values, and controlling reproducing power such that the ratio approaches a previously set standard value;

the demodulation method used by said demodulation

section is the PR(1,2,1)ML demodulation method; and

the clock signal outputted by said clock signal output section is a signal having a frequency double that of a clock signal in accordance with only the modulation method and the demodulation method.

23. The optical reproducing device set forth in claim 21, wherein said reproducing power control section comprises:

a timing detecting section, which, based on digital signals demodulated by said demodulation section, obtains a timing at which recorded marks suited to reproducing power control were sampled; and

a reproducing power control circuit, which, based on the timing obtained by said timing detecting section, extracts, from the second digital signal, digital signals corresponding to the recorded marks, and controls reproducing power based on these digital signals.

24. An optical memory medium comprising a recording layer for recording data, and a reproducing layer, laminated on said recording layer, on which an aperture is formed by projection of a predetermined light beam, from which aperture the data recorded on said recording layer is read, wherein:

on a track for recording of data are provided:

a data recording domain, for recording of ordinary data;

a reproducing power control domain, for recording of recorded marks for reproducing power control, for controlling reproducing power of the light beam; and

a disk information domain, for recording of the modulation method of the recorded marks in said data recording domain and said reproducing power control domain, and the state of recording of the recorded marks for reproducing power control.